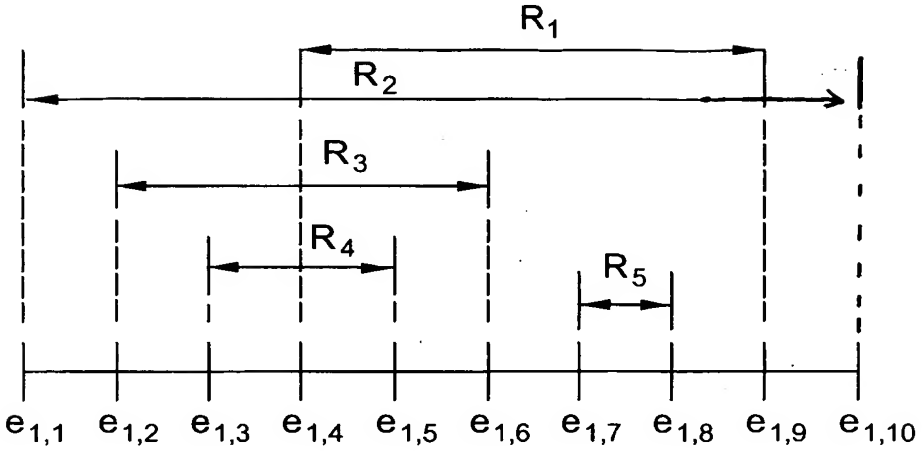
RULE	F_1	F_2	F_3
R_1	$[e_{1,4}, e_{1,9}]$	$[e_{2,7}, e_{2,8}]$	$[e_{3,1}, e_{3,1}]$
R_2	$[e_{1,1}, e_{1,10}]$	$[e_{2,2}, e_{2,6}]$	$[e_{3,2}, e_{3,6}]$
R_3	$[e_{1,2}, e_{1,6}]$	$[e_{2,3}, e_{2,5}]$	$[e_{3,7}, e_{3,9}]$
R_4	$[e_{1,3}, e_{1,5}]$	$[e_{2,9}, e_{2,10}]$	$[e_{3,4}, e_{3,5}]$
R_5	$[e_{1,7}, e_{1,8}]$	$[e_{2,1}, e_{2,4}]$	$[e_{3,3}, e_{3,8}]$

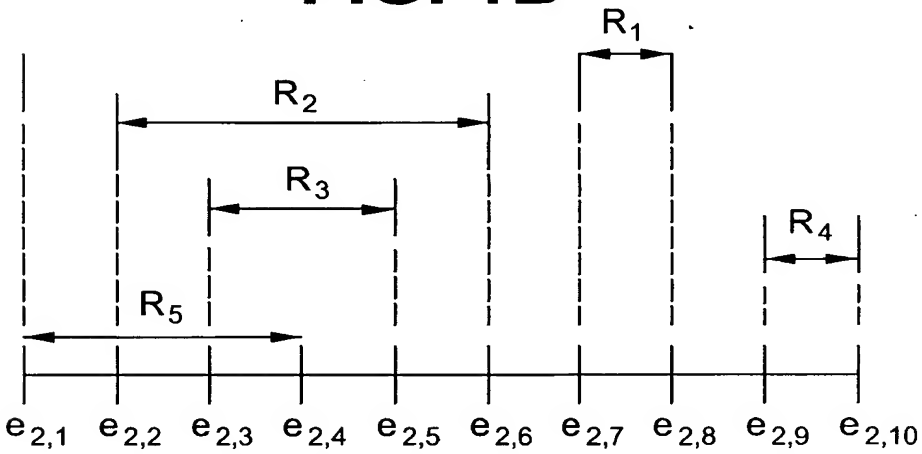
RULE SET S

FIG. 1A



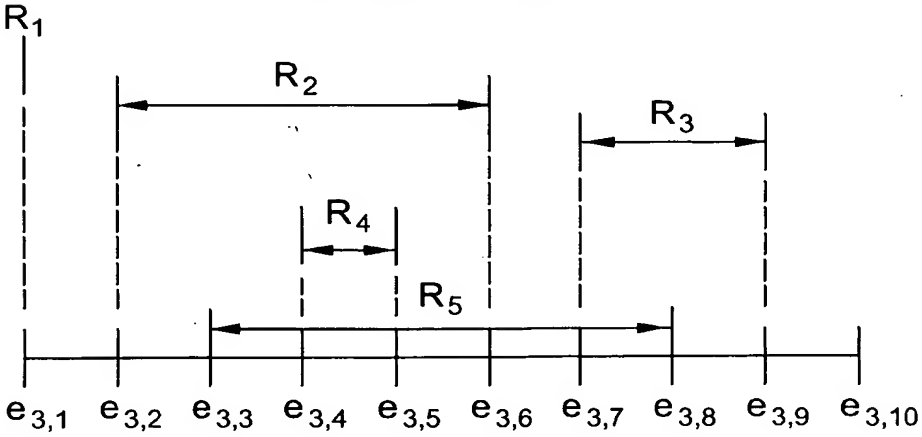
THE SET OF INTEGER INTERVALS $F_1(S)$

FIG. 1B



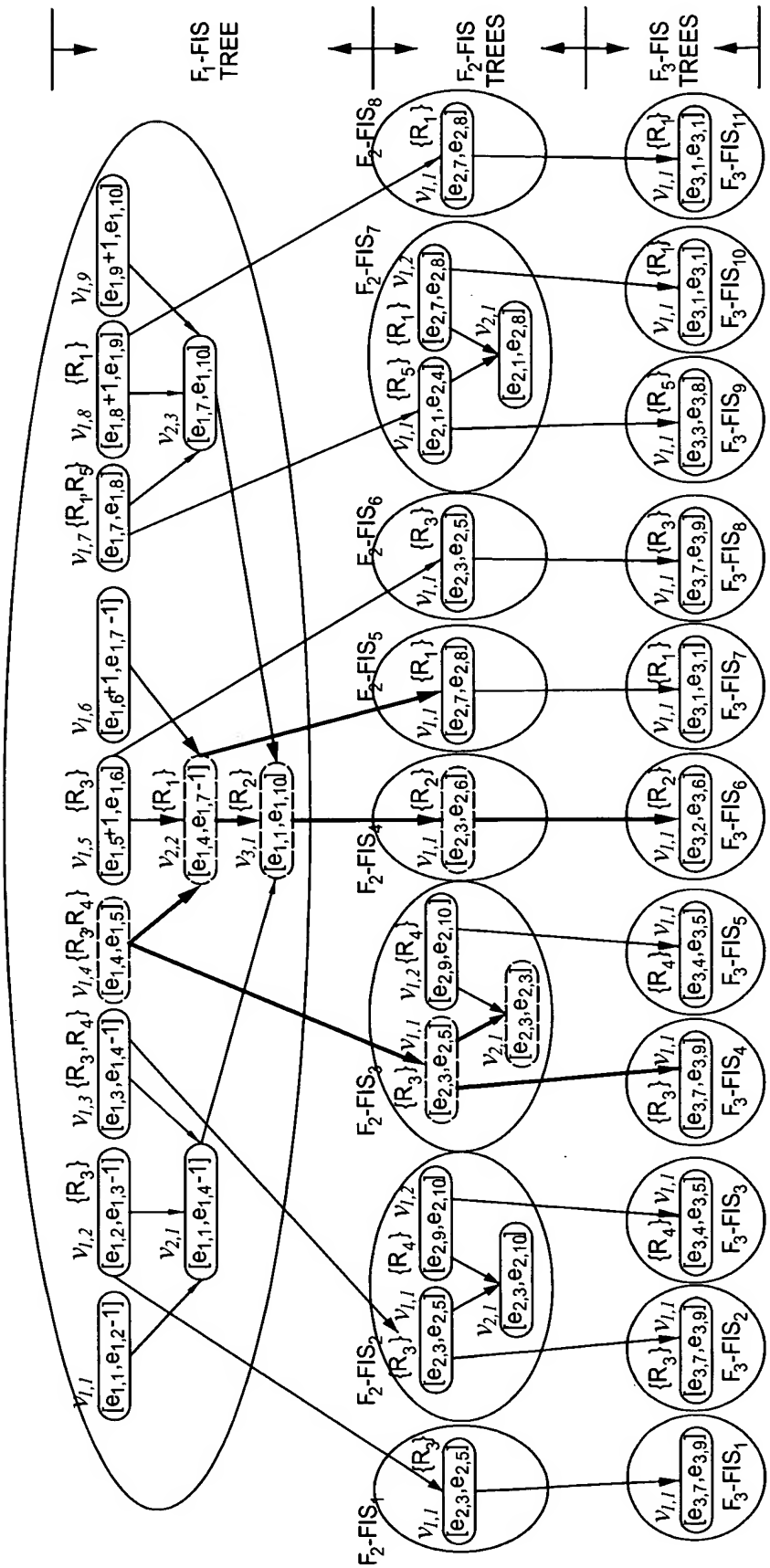
THE SET OF INTEGER INTERVALS $F_2(S)$

FIG. 1C



THE SET OF INTEGER INTERVALS $F_3(S)$

FIG. 1D

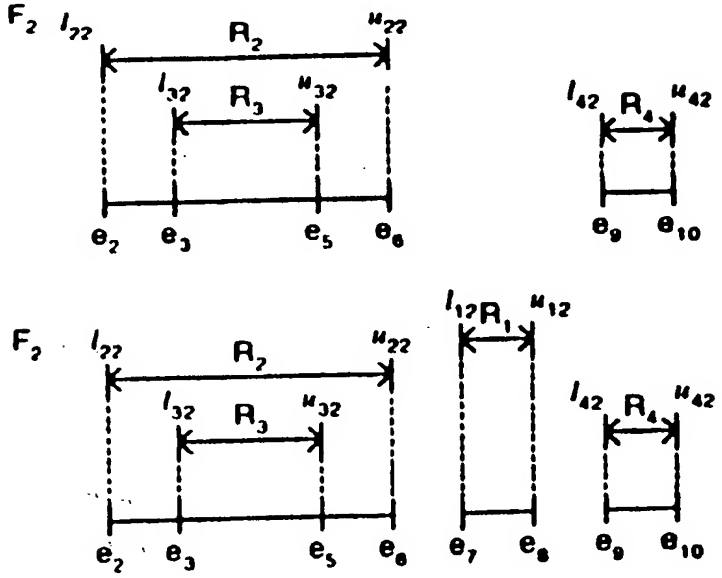


THE FIS TREES BUILT FOR THE RULE SET S AND THE SEARCHING PATHS FOR THE PACKET *P*

FIG. 2

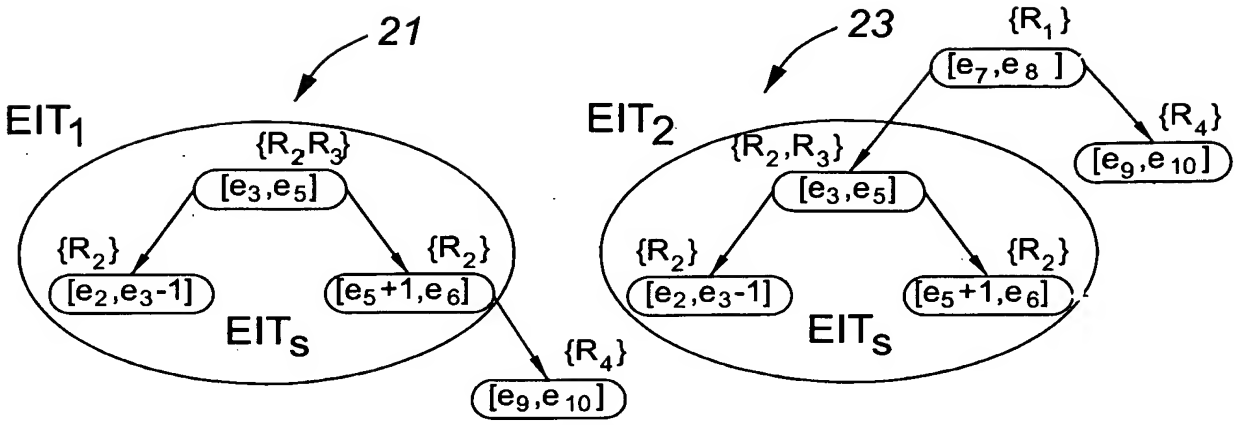
The rule table T

Rule	F_1	F_2	F_3
R_1	$[e_4, e_9]$	$[e_7, e_8]$	$[e_1, e_1]$
R_2	$[e_1, e_{10}]$	$[e_2, e_6]$	$[e_2, e_6]$
R_3	$[e_2, e_6]$	$[e_3, e_5]$	$[e_7, e_9]$
R_4	$[e_3, e_5]$	$[e_9, e_{10}]$	$[e_4, e_5]$
R_5	$[e_7, e_8]$	$[e_1, e_4]$	$[e_3, e_8]$



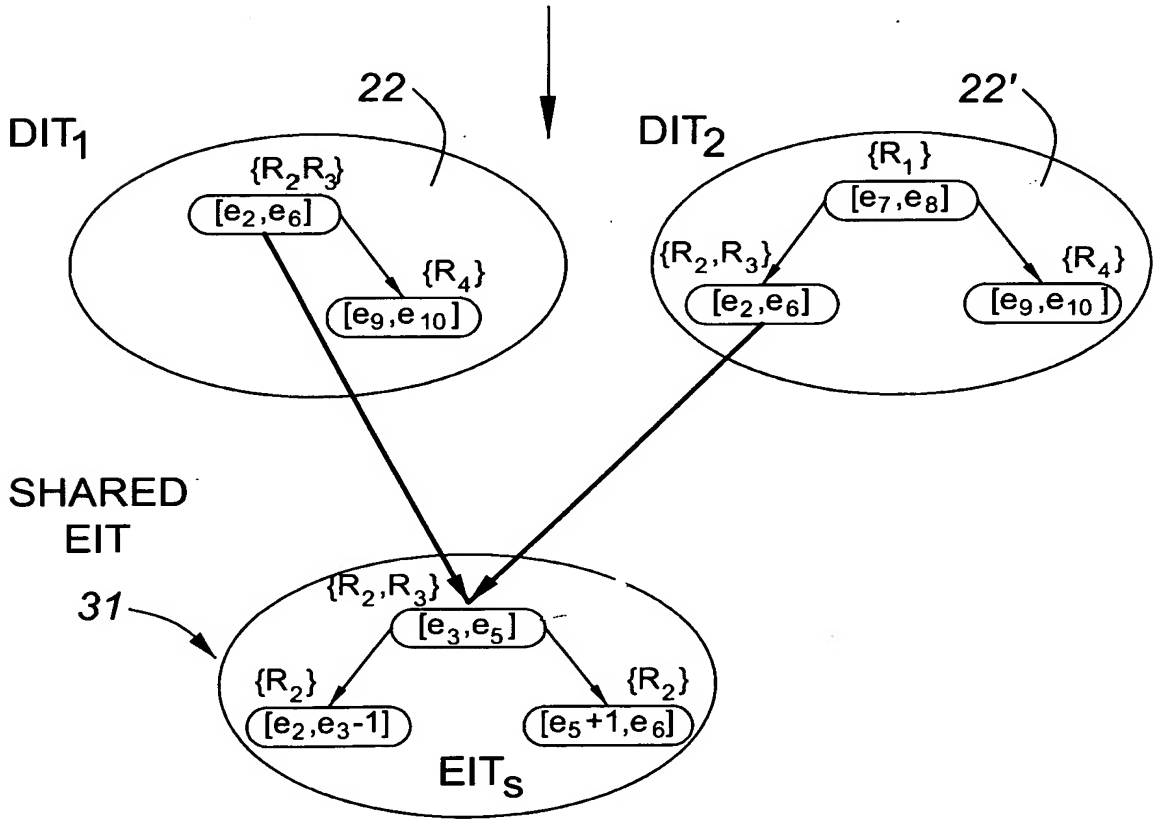
DISJOINTED INTERVALS $F_2(S_1)$ AND $F_2(S_2)$, $S_1=(R_2,R_3,R_4)$, $S_2=(R_1,R_2,R_3,R_4)$

FIG. 3A



EITs CONSTRUCTED FOR $F_2(S_1)$ AND $F_2(S_2)$,
$S_1 = \{R_2, R_3, R_4\}$, $S_2 = \{R_1, R_2, R_3, R_4\}$

FIG. 3B



DISJOINTED GRAPH CONSTRUCTED FOR
$F_2(S_1)$ AND $F_2(S_2)$, $S_1 = \{R_2, R_3, R_4\}$, $S_2 = \{R_1, R_2, R_3, R_4\}$

FIG. 3C

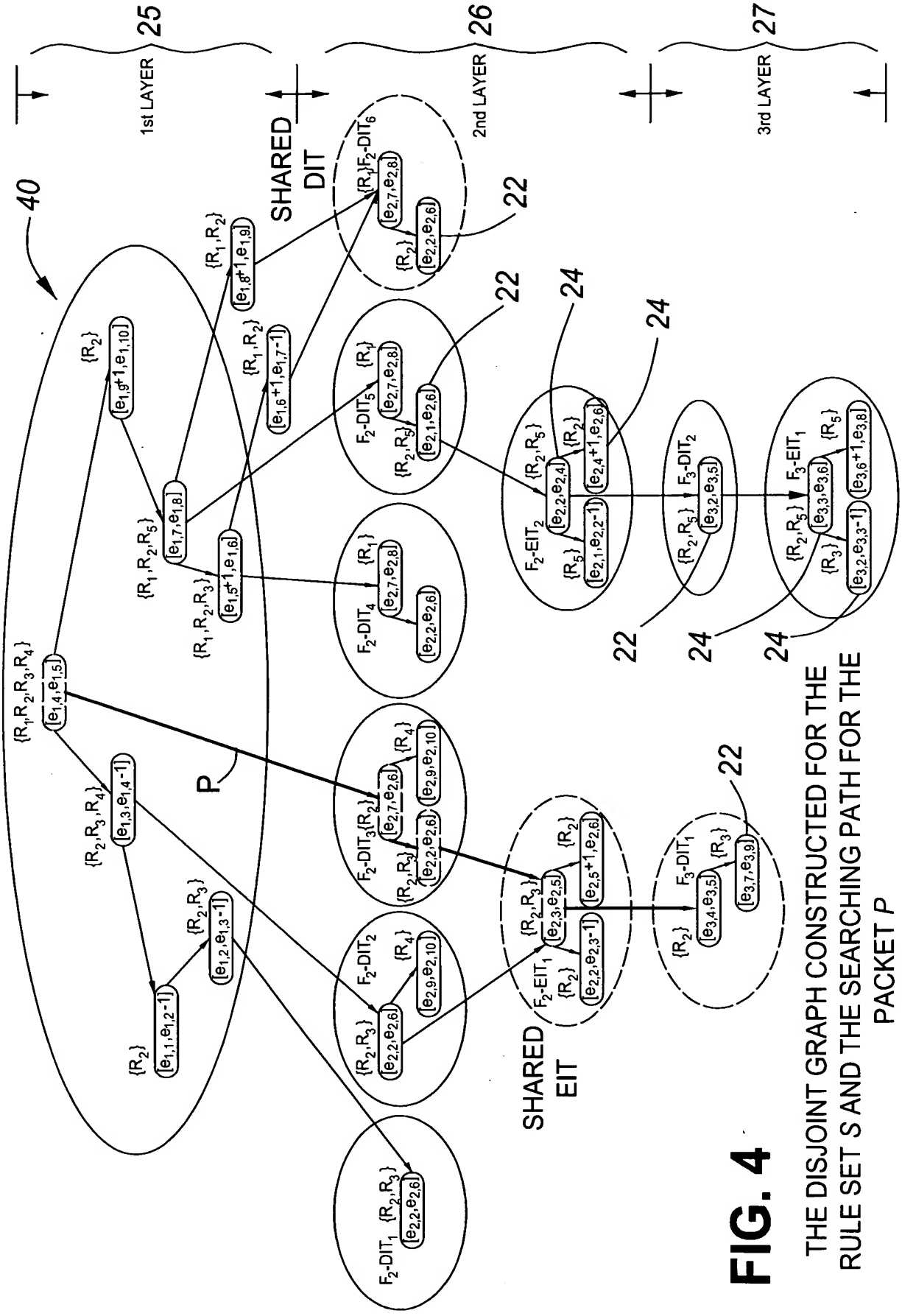


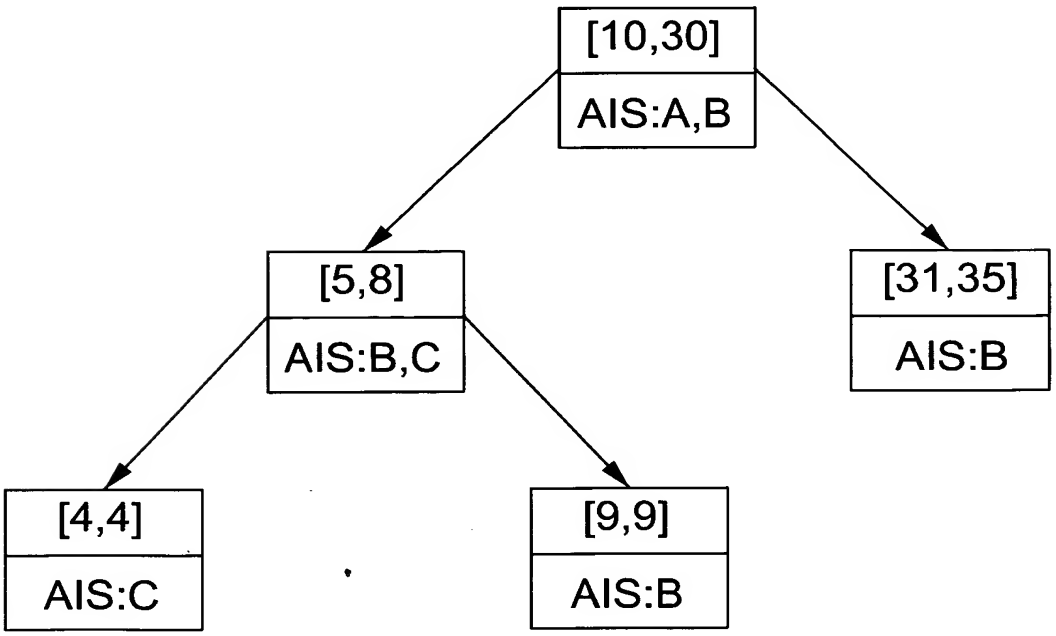
FIG. 4

THE DISJOINT GRAPH CONSTRUCTED FOR THE RULE SET S AND THE SEARCHING PATH FOR THE PACKET *P*

IDENTIFIERS	A	B	C
INTERVALS	[10,30]	[5,35]	[4,8]

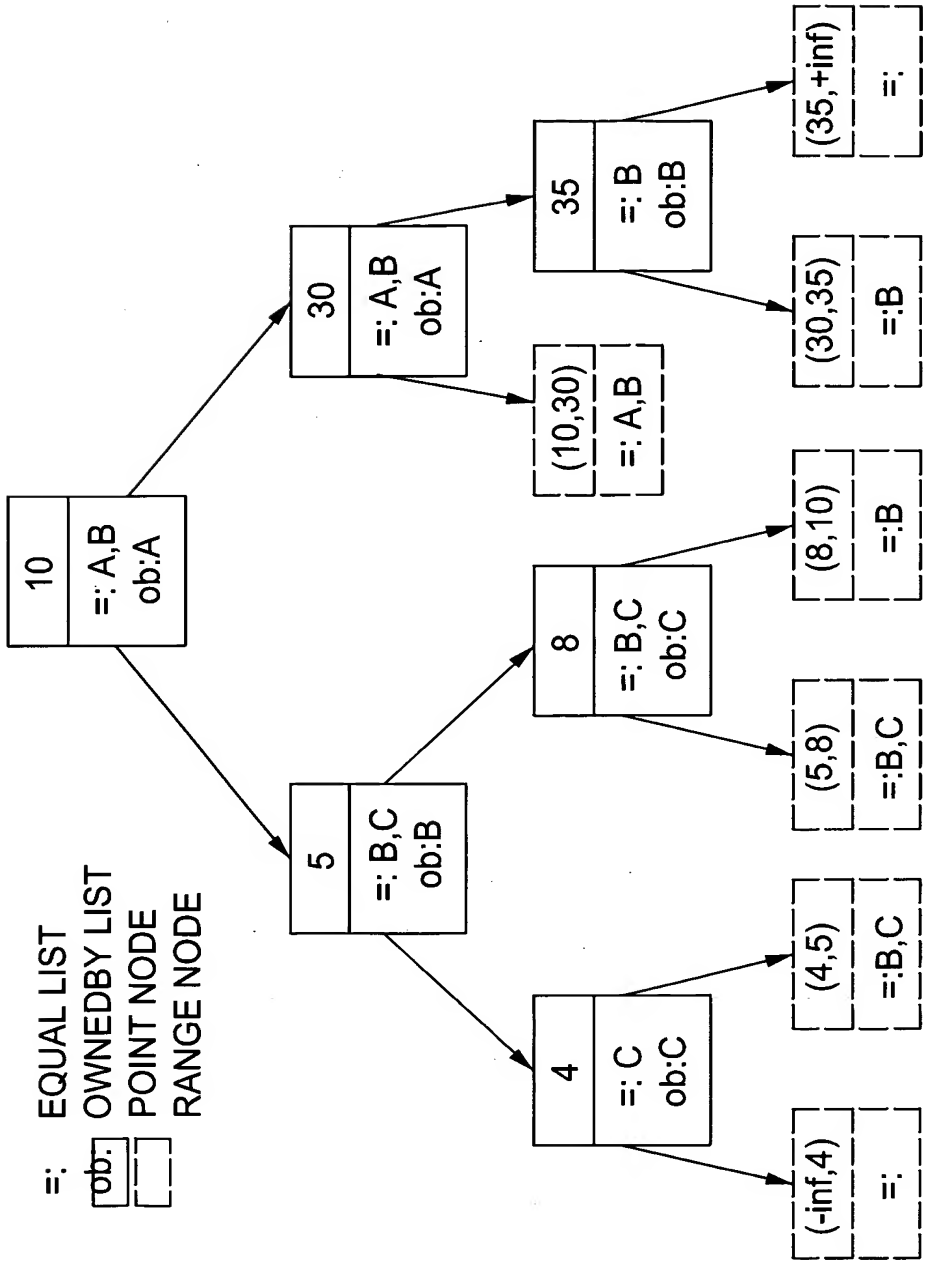
THE INTERVALS SET *S* WITH 3 INTERVALS

FIG. 5



THE ELEMENTARY INTERVAL TREE BUILT FOR *S*

FIG. 7



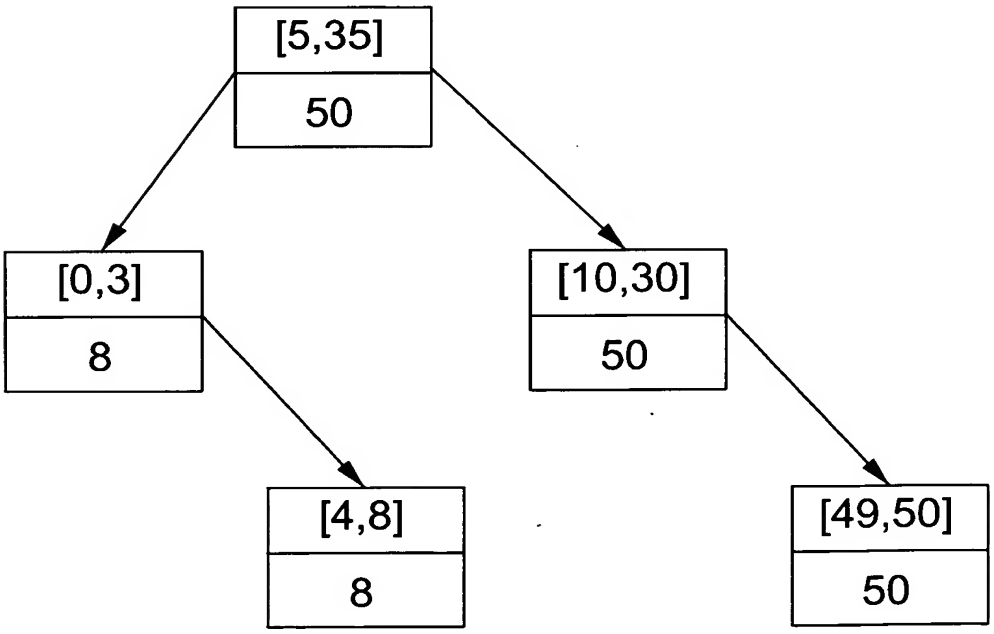
THE PR-TREE BUILT FOR S

FIG. 6

IDENTIFIERS	A	B	C	D	E
INTERVALS	[10,30]	[5,35]	[0,3]	[4,8]	[49,50]

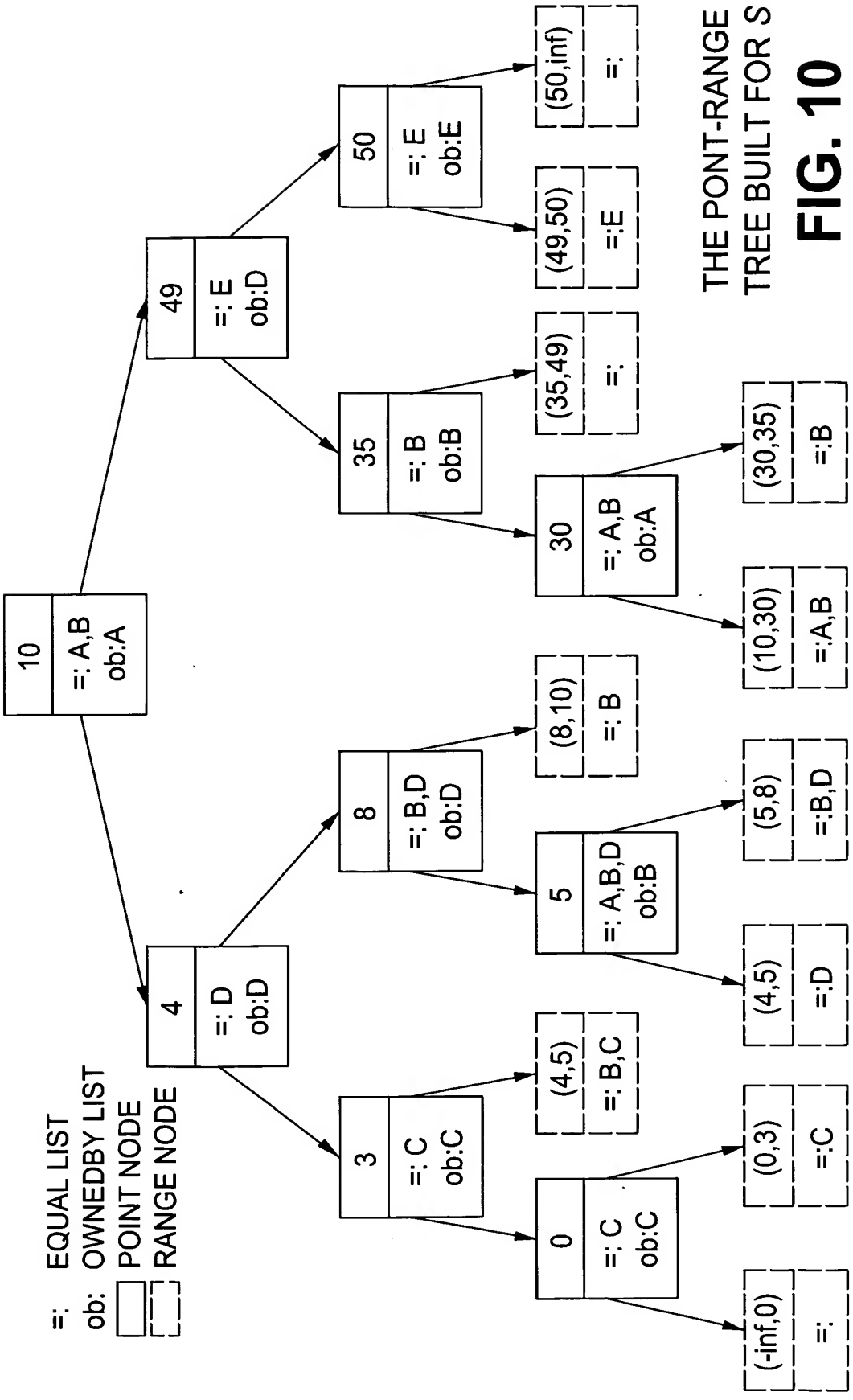
THE INTERVALS SET *S* WITH 5 INTERVALS

FIG. 8



THE INTERVAL TREE BUILT FOR *S*

FIG. 9



THE PONT-RANGE TREE BUILT FOR S

FIG. 10

INTERVALS	[0,4)	[4,5)	[5,10)	[10,49)	[49,MAX)
LABELS	000	001	010	011	100

THE SET OF INTERVALS FORMED FROM LOWER ENDPOINTS

FIG. 11A

INTERVALS	(0,0]	(0,3]	(3,8]	(8,30]	(30,35]	(35,50]	[50,MAX)
LABELS	000	001	010	011	100	101	110

THE SET OF INTERVALS FORMED FROM UPPER ENDPOINTS

FIG. 11B

A	[10,30]	011	011	011	011
B	[5,35]	010,011	01*	010,011,100	***
C	[0,3]	000	000	000,001	00*
D	[4,8]	001,010	0**	010	010
E	[49,50]	100	100	101	101

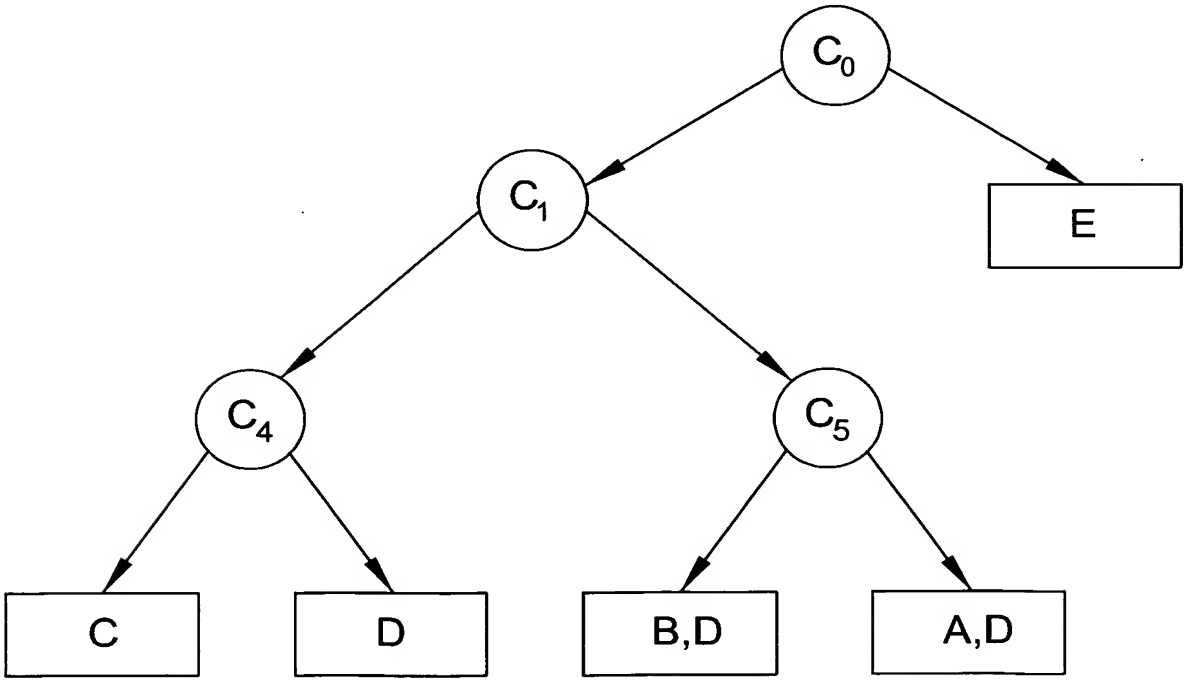
THE STEPS TO FORM THE MATRIX

FIG. 11C

	C_0	C_1	C_2	C_3	C_4	C_5
A	0	1	1	0	1	1
B	0	1	*	*	*	*
C	0	0	0	0	0	*
D	0	*	*	0	1	0
E	1	0	0	1	0	1

THE MATRIX FORMED FOR THE SET OF INTERVALS

FIG. 11D

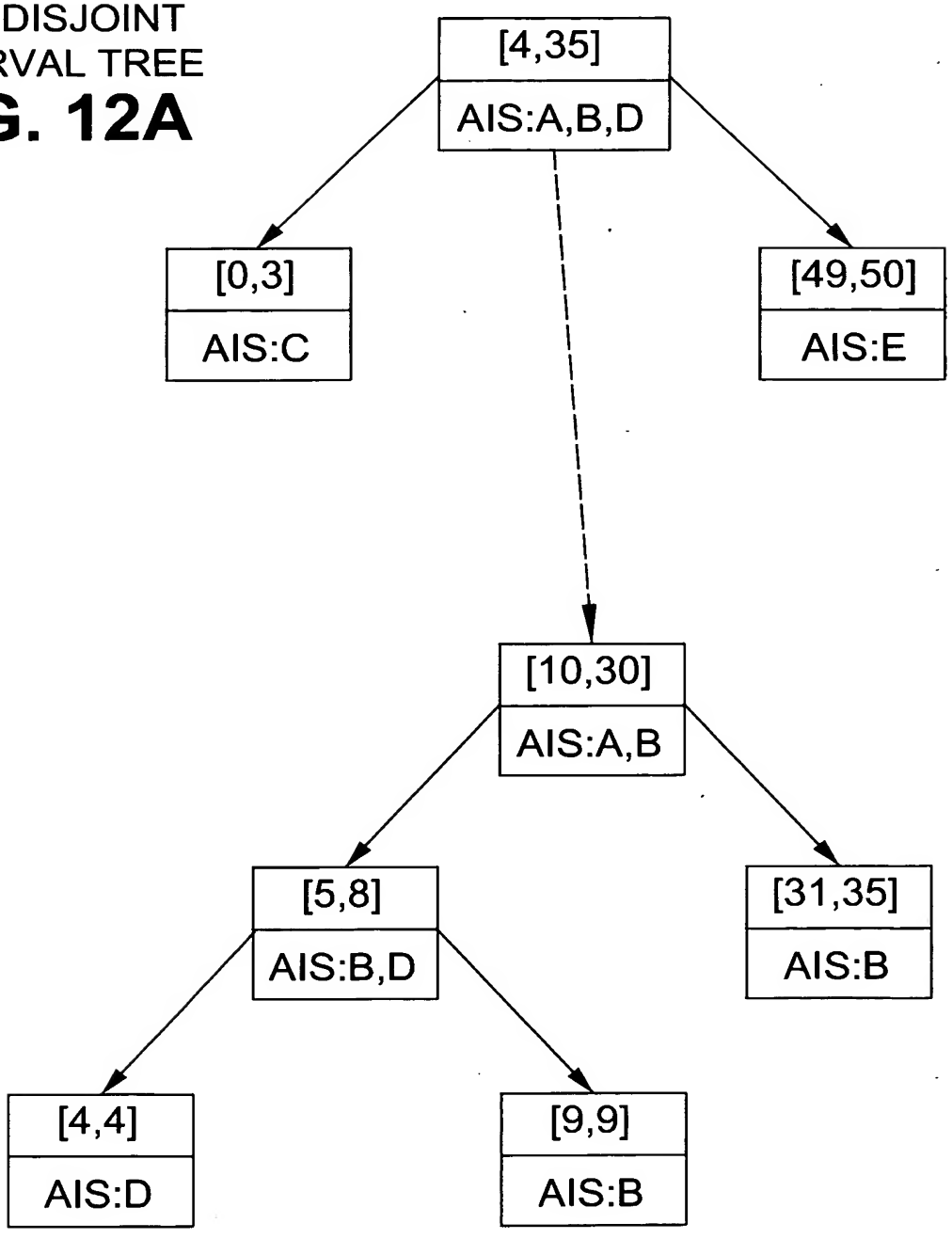


THE DECISION TREE BUILT FOR *S*

FIG. 11E

THE DISJOINT
INTERVAL TREE

FIG. 12A



THE ELEMENTARY INTERVAL TREE BUILT FOR *S*

FIG. 12B